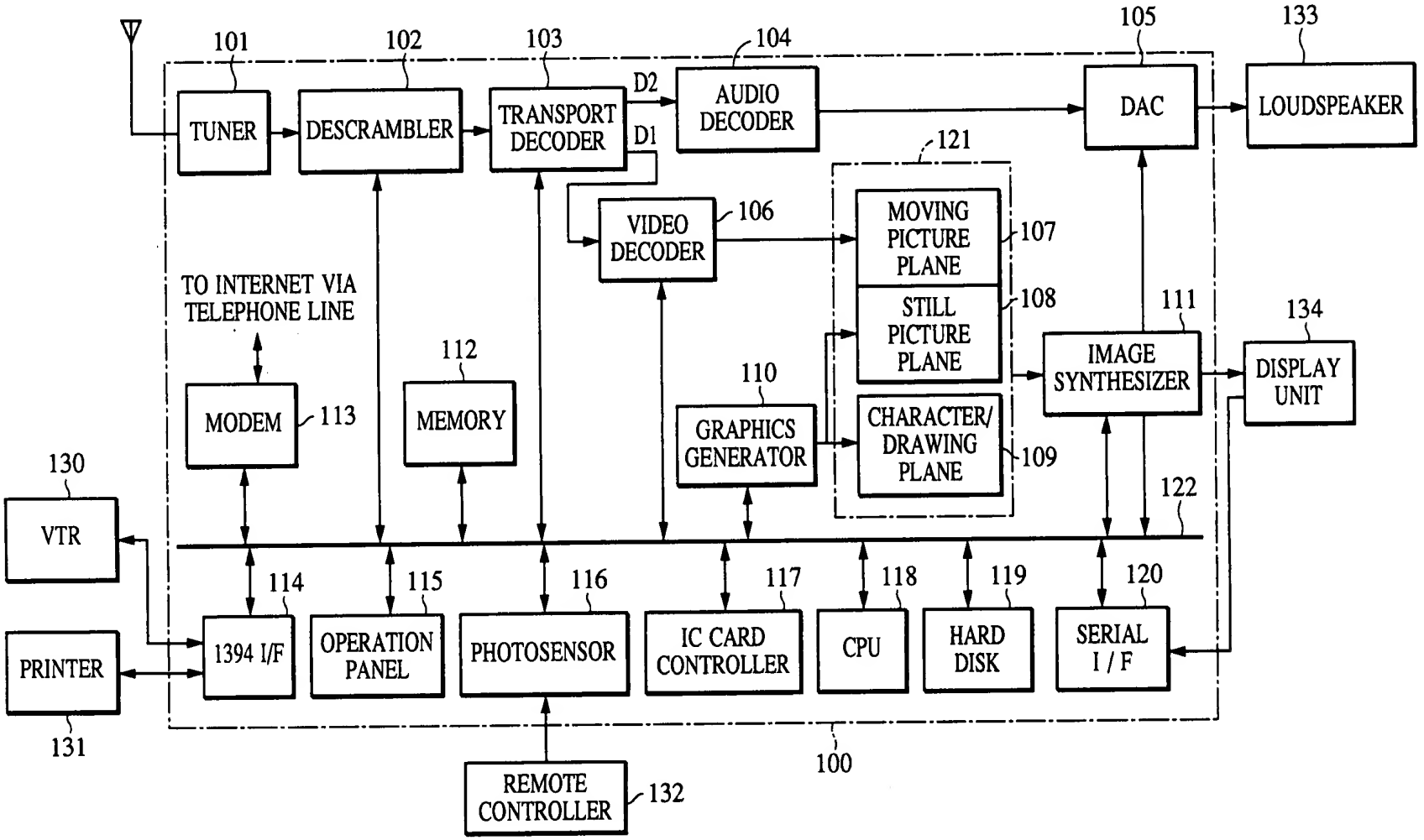
101
102
103
104
105
133
TUNER
DESCRAMBLER
TRANSPORT DECODER
D2
D1
AUDIO DECODER
DAC
LOUDSPEAKER
121
VIDEO DECODER
106
MOVING PICTURE PLANE
107
STILL PICTURE PLANE
108
TO INTERNET VIA TELEPHONE LINE
111
134
IMAGE SYNTHESIZER
DISPLAY UNIT
112
MODEM
113
MEMORY
110
GRAPHICS GENERATOR
CHARACTER/ DRAWING PLANE
109
130
122
VTR
114
115
116
117
118
119
120
1394 I/F
OPERATION PANEL
PHOTOSENSOR
IC CARD CONTROLLER
CPU
HARD DISK
SERIAL I / F
PRINTER
131
100
REMOTE CONTROLLER
132

FIG. 1

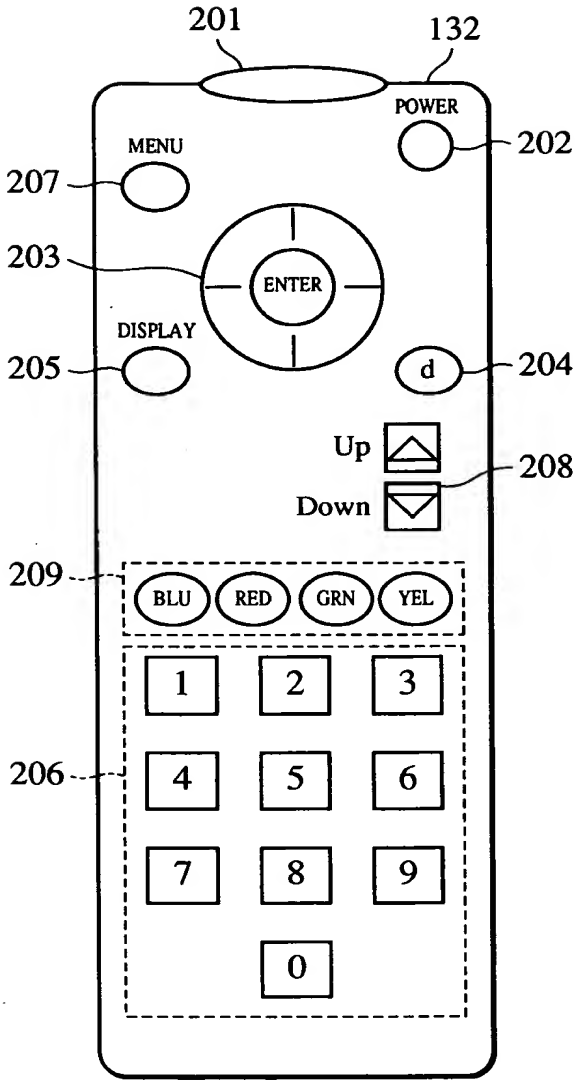
201
132
POWER
202
MENU
207
203
ENTER
DISPLAY
205
d
204
Up
208
Down
209
BLU
RED
GRN
YEL
1
2
3
206
4
5
6
7
8
9
0

FIG. 2

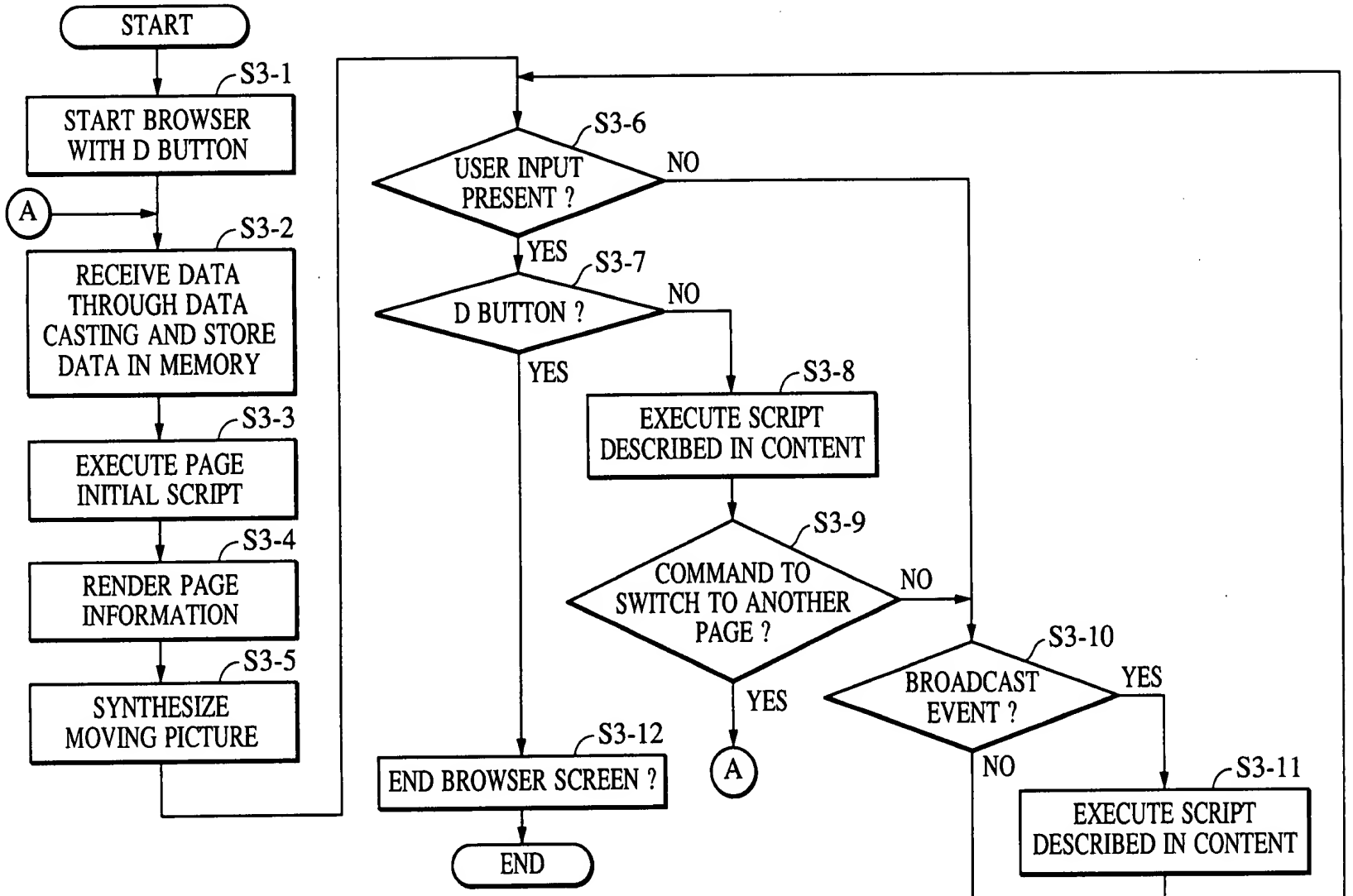
START
S3-1
START BROWSER WITH D BUTTON
A
S3-2
RECEIVE DATA THROUGH DATA CASTING AND STORE DATA IN MEMORY
S3-3
EXECUTE PAGE INITIAL SCRIPT
S3-4
RENDER PAGE INFORMATION
S3-5
SYNTHESIZE MOVING PICTURE
S3-6
USER INPUT PRESENT ?
NO
YES
S3-7
D BUTTON ?
NO
YES
S3-8
EXECUTE SCRIPT DESCRIBED IN CONTENT
S3-9
COMMAND TO SWITCH TO ANOTHER PAGE ?
NO
YES
A
S3-10
BROADCAST EVENT ?
YES
NO
S3-11
EXECUTE SCRIPT DESCRIBED IN CONTENT
S3-12
END BROWSER SCREEN ?
END

FIG. 3

```
<IDOCTYPE dbc SYSTEM "http://www.xxx.co.jp/dbc.dtd">
<head>
<title News AM7</title>

<script language = "JavaScript">
var pdntenable = ();

function initialize(){                                          // (B)
   printenable = Browser.GetBrowserSupport("print")             // (C)
      var imag = document.getElementByld("pngPrintBtn");
      var para = document.getElementbyld("pPrintBtn");
   if(printenable ==1){
      imag.style.visibility = "visible"                         // (D)
      para.style.visibility = "visible"
   }
   else{
      imag.style.visibility = "hidden"
      para.style.visibility = "hidden"
   }
}
```

FIG. 4

```
function keydown(){
    var code = documet.currentEvent.keyCode;
    if(code == "UP"){
        if( --focusmenu <0){focusmenu = 3;}
    }
    if(code == "UP"){
        if( --focusmenu <0){focusmenu = 3;}
    }
    if(code == "ABC"){                                                    // (E)
        if(focusmenu == 0){browser.launchDocument("seiji.xml");}
        if(focusmenu == 1){browser.launchDocument("keizai.xml");}
        if(focusmenu == 2){browser.launchDocument("shakai.xml");}
        if(focusmenu == 3){browser.launchDocument("sports.xml");}
    }
    if(code =="RED"){
        var tmp = document.getElementByle("pngPrintBtn");
        if(tmp.style.visivility == visible){browser.launchDocument("print.xml");}    // (F)
    }
}
</script>
</head>
```

FIG. 5

```
<body onLoad = "initialize()">                                                    //(A)
<div onkeydown = "keydown();"/>                                                   //
<div style = "left:60px; top:40px; width:480px; height:270px;">
   <object style = "left:0px; top:0px; width:480px; height:270px;" data = "/-1" type = "video/X-arib-mpeg2" remain = "remain"/>
   <object data = "/-1" type = "video/X-ariv-mpeg2-aac" streamstatus = "play"/>
</div>
<div style = "top:38px; left:583px; width:310px; height:463px">
   <p style = "left:4px; top:0px; width:300px; height:80px; font-size:24px; line-height:24px;>7 O'CLOCK MORNING NEWS</p>
   <div style = "top:90px; left:5px; width:300px; height:42px;">
      <object id = "pngPlate0" data = "~/0001/plate.png" type = "image/X-atrib-png"/>
      <p id = "pMenu0" style = "top:5px; left:1px; width:300px; height:42px; font-size:24px">POLITICS</p>
   </div>
   <div style = "top:140px; left:5px; width:300px; height:42px;">
      <object id = "pngPlate1" data = "~/0001/plate.png" type = "image/X-atrib-png"/>
      <p id = "pMenu1" style = "top:5px; left:1px; width:300px; height:42px; "font-size:24px">ECONOMY</p>
```


FIG. 6

```
    </div>
    <div style = "top:190px; left:5px; width:300px; height:42px;">
        <object id = "pngPlate2" data = "~/0001/plate.png" type = "image/X-atrib-png"/>
        <p id = "pMenu2" style = "top:5px; left:1px; width:300px; height:42px;" font-size:24px>LOCAL NEWS</p>
    </div>
    <div style = "top:240px; left:5px; width:300px; height:42px;">
        <object id = "pngPlate3" data = "~/0001/plate.png" type = "image/X-atrib-png"/>
        <p id = "pMenu3" style = "top:5px; left:1px; width:300px; height:42px;" font-size:24px>SPORTS</p>
    </div>
</div>
<div style = "left:70px; top:350px; width:480px; height:150px;">
    <object id = "pngPrintBtn" style = "left:127px; top:20px; width:30px; height:30px" data = "Rbin.png" type = "image/X-atrib-png"/>
    <p id = "pPrintBtn" style = "left:164px; top:19px; width:200px; height:30px; font-size:24px>PRINT NEWS SUMMARY</p>
</div>
</body>
```

FIG. 7

EP 0 956 715 A2

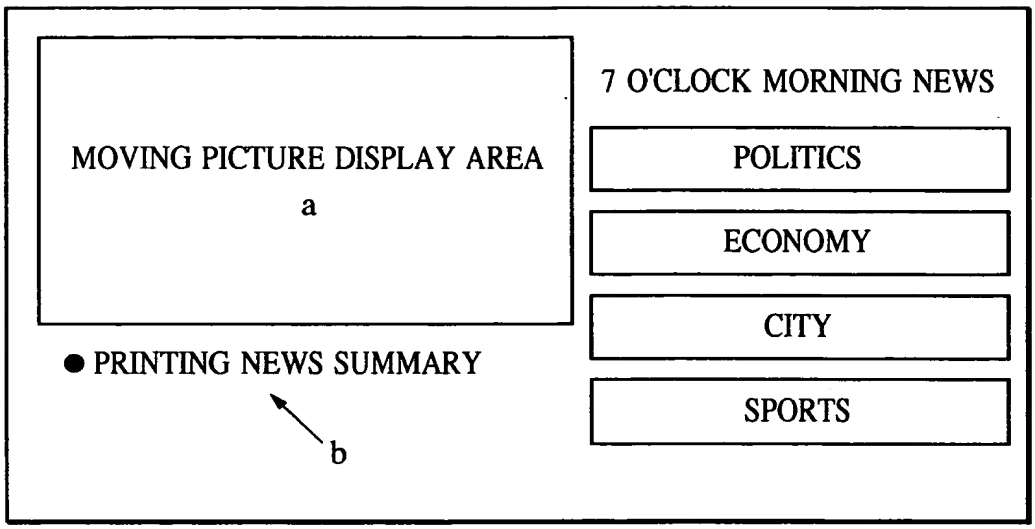

FIG. 8

```
<IDOCTYPE dbc SYSTEM "http://www.xxx.co.jp/dbc.dtd">
<head>
<title News Print</title>

<script language = "JavaScript">
var printenable = 0;

function initialize(){                                                                    // (B)
  var rdy = browser.prnSetReady();                    //PRINTER IS SET TO BE READY FOR PRINTING    // (C)
  if(rdy == (){
      document.getElementByld("StatusText");firstChild.data = "STATUS : NO USABLE PRINTER IS AVAILABLE";
    return;
  }
  //SPECIFICATIONS OF PRINTER ARE EXAMINED
  var spc = browser.prnGetSpec("size","A4");                                              // (D)
  if(spec == 0){
      var spc = browser.prnGetSpec("size","A3");
      if(spec == 0){
          document.getElementByld("StatusText");firstChild.data = "STATUS : PRINTER IS NOT COMPATIBLE
          WITH REQUIRED SHEET SIZE";
      return;
  }
   document.getElementByld("StatusText");firstChild.data = "STATUS : READY TO PRINT";
}

functulon print(){                                                                        // (E)
  var result = browser.prnStart("~/printdeta.xml");
  if(result == 1){
      document.getElementByld("StatusText");firstChild.data = "STATUS : PRINTING COMPLETED";
  }
```

FIG. 9

```
  else{
      document.getElementByld("StatusText");firstChild.data = "STATUS : PRINTING ABORTED";
  }
  browser.clearTimer(timerld);
  timerld browser.setInterval("proccess_timer_event();",5000,120);                    //(F)
}

function proccess_timer_event(){
  var sts = browser.prnGetStatus("printing");                                         //(G)
if(sts == 1){
      document.getElementByld("StatusText");firstChild.data = "STATUS : NOW PRINTING";
  }
  else{
      sts = browser.prnGetStatus("err_stop");
      if(sts== 1){
 document.getElementByld("StatusText");firstChild.data = "STATUS : PRINTER STOPS DUE TO AN ERROR";
      }
      else{
          finished();
          browser.clearTimer(timerld);
      }
  }
}

function finished();                                                                  //(H)
      document.getElementByld("StatusText");firstChild.data = "STATUS : PRINTING COMPLETED";
}
</sript>
</head>
```

FIG. 10

```
<body onLoad = "initialize()">                                                    //(A)
<div style = "left:60px; top:40px; width:480px; height:270px">
<object style = "left:0px; top:0px; width:480px; height:270px;" data = "/1" type = "video/X-arib-mpeg2" remain = "remain"/>
<object data = "/-1" type = "vidio/X-arib-mpeg2-aac" streamstatus = "play"/>
</div>
<div style = "top:38px; left:583px; width:310px; height:463px">
<p style = "left:4px top:0px; width:300px; height:80px; font-size:24px; line-height:24px;>NEWS SUMMARY IS PRINTED</p>
<div style = "top:90px; left:5px; width:300ps; height:42px;">
<object id = "pngPlate0" data = "~/0001/plate.png" type = "image/X-atrib-png"/>
<p id = "pMenu0" style = "top:5px; left:1px; width:300px; height:42px; font-size:24px">PRINTING STARTS</p>
</div>
<p id = "StatusText" style = "left:4px; top:130px; width:300px; height:80px; font-size:24px; line-height:24px;>STATUS :
        PREPARATION FOR PRINTING IS IN PROGRESS</p>
</div>
<div style = "left:70px; top:350px; width:480ps; height:150px;">
<p id = "pPrintBtn" style = "left:164px; top:19px; width:200px; height:30px; font-size:24px>PRESS RETURN KEY TO RETURN TO MENU</p>
</div>
</body>
```

FIG. 11

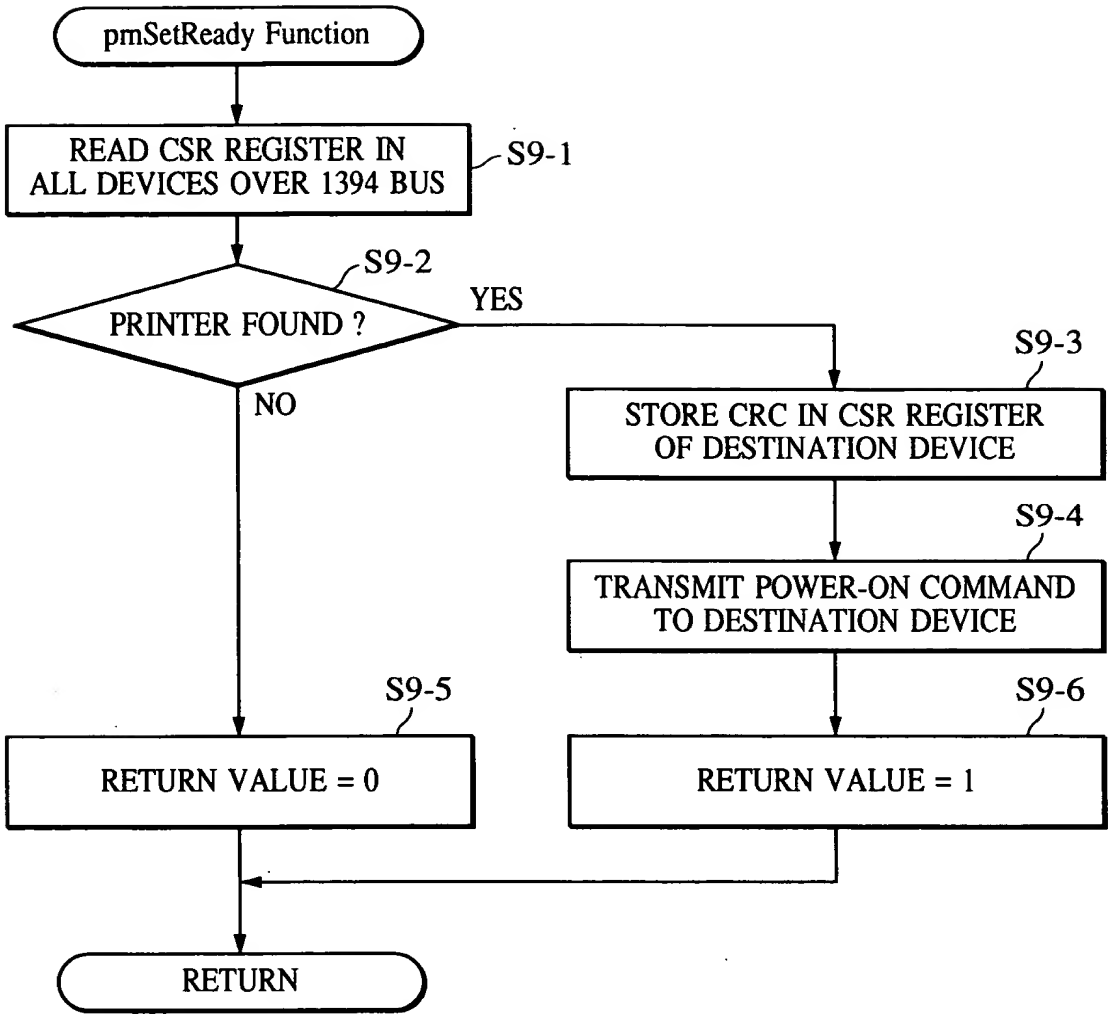
pmSetReady Function
READ CSR REGISTER IN ALL DEVICES OVER 1394 BUS
S9-1
S9-2
PRINTER FOUND ?
YES
NO
S9-3
STORE CRC IN CSR REGISTER OF DESTINATION DEVICE
S9-4
TRANSMIT POWER-ON COMMAND TO DESTINATION DEVICE
S9-5
RETURN VALUE = 0
S9-6
RETURN VALUE = 1
RETURN

FIG. 12

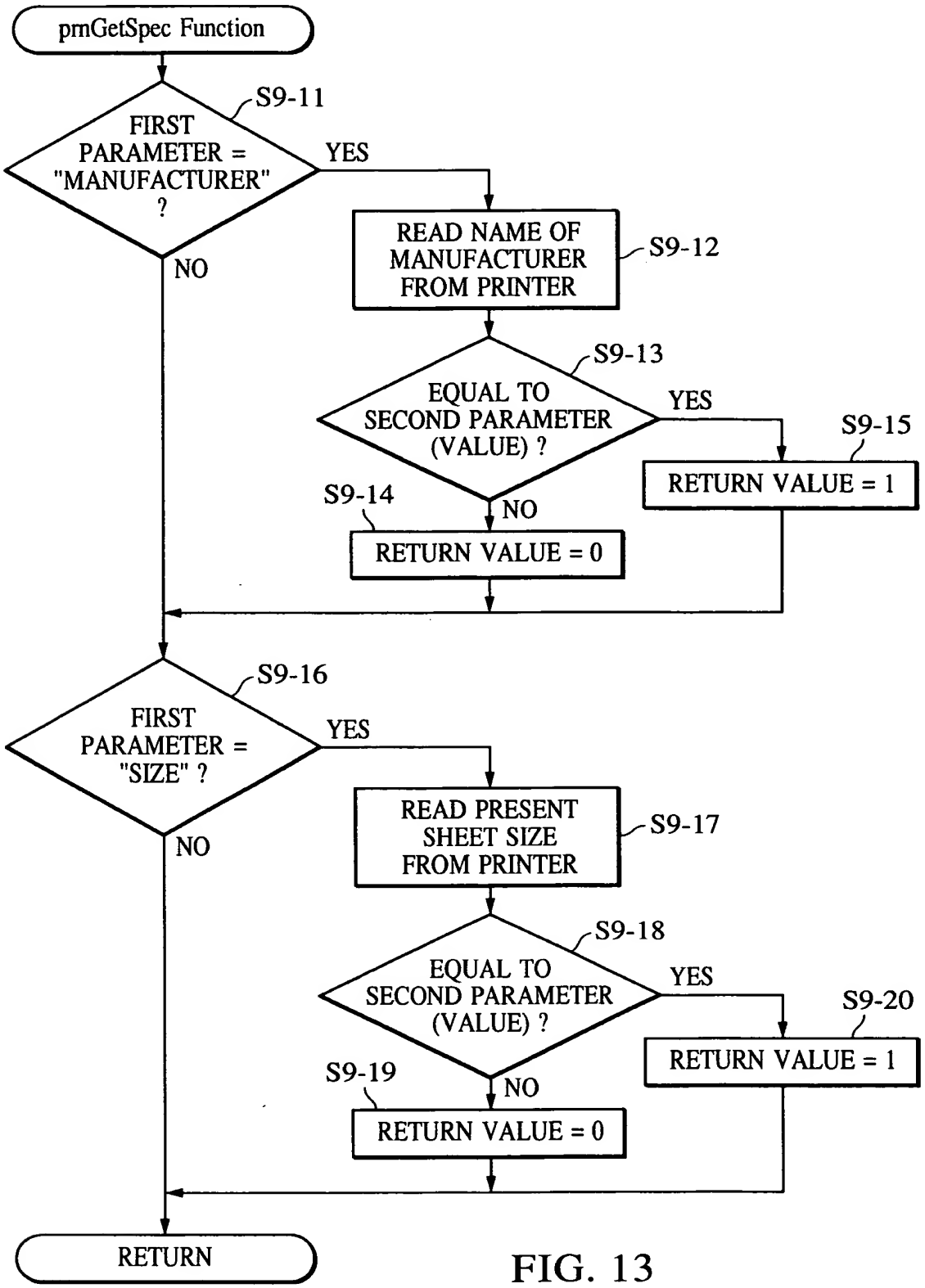

FIG. 13

09695504 - 112504

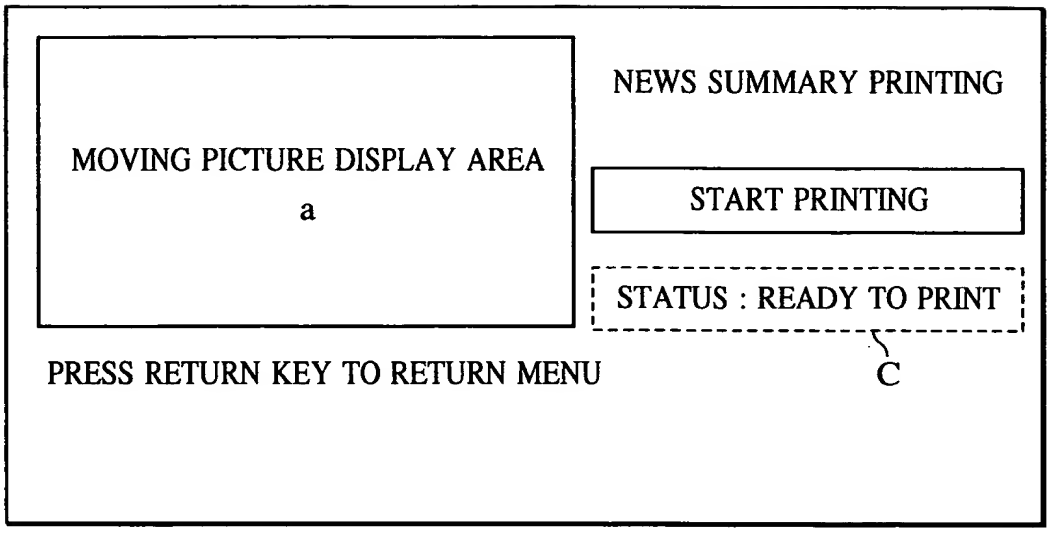
MOVING PICTURE DISPLAY AREA
a
NEWS SUMMARY PRINTING
START PRINTING
STATUS : READY TO PRINT
C
PRESS RETURN KEY TO RETURN MENU

FIG. 14

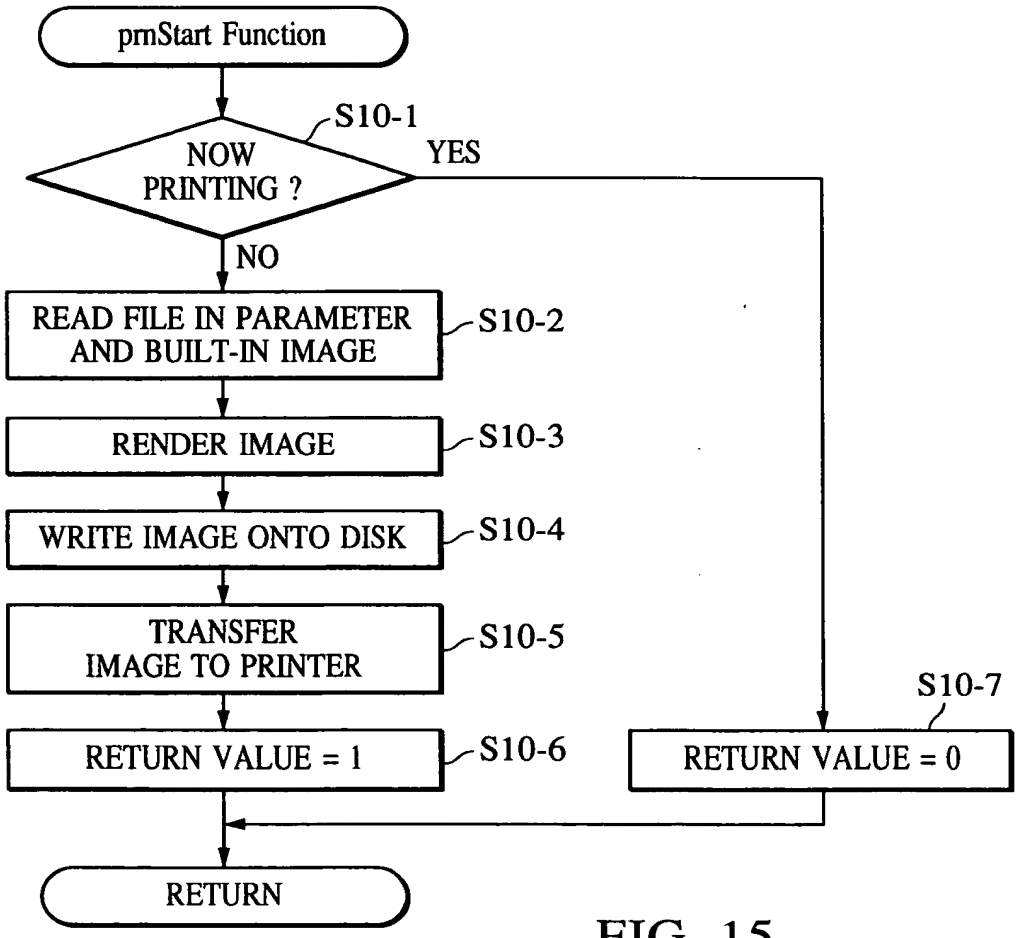
prnStart Function
S10-1
NOW PRINTING ?
YES
NO
READ FILE IN PARAMETER AND BUILT-IN IMAGE
S10-2
RENDER IMAGE
S10-3
WRITE IMAGE ONTO DISK
S10-4
TRANSFER IMAGE TO PRINTER
S10-5
RETURN VALUE = 1
S10-6
S10-7
RETURN VALUE = 0
RETURN

FIG. 15

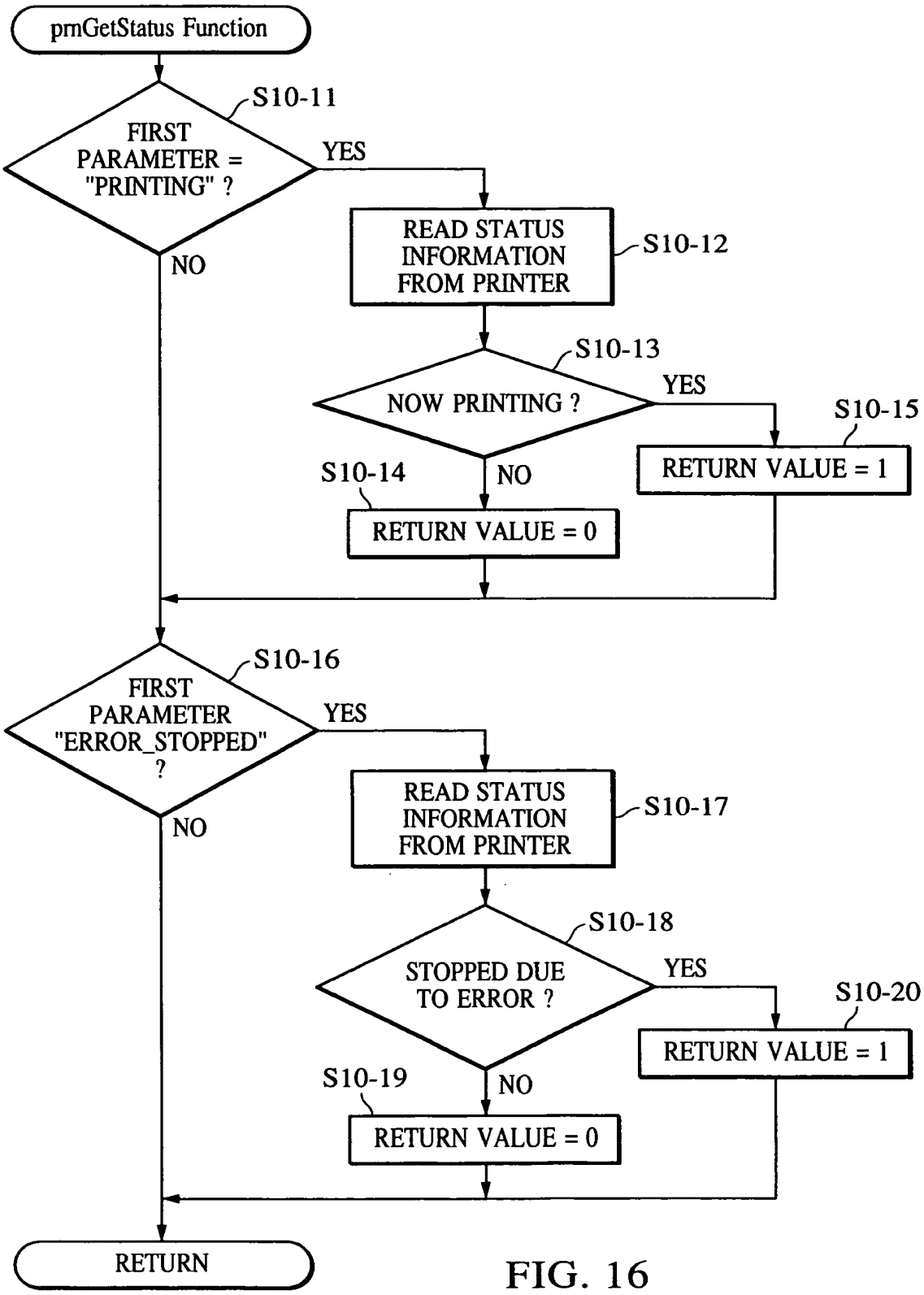
prnGetStatus Function
S10-11
FIRST PARAMETER = "PRINTING" ?
YES
NO
READ STATUS INFORMATION FROM PRINTER
S10-12
S10-13
NOW PRINTING ?
YES
NO
S10-15
RETURN VALUE = 1
S10-14
RETURN VALUE = 0
S10-16
FIRST PARAMETER "ERROR_STOPPED" ?
YES
NO
READ STATUS INFORMATION FROM PRINTER
S10-17
S10-18
STOPPED DUE TO ERROR ?
YES
NO
S10-20
RETURN VALUE = 1
S10-19
RETURN VALUE = 0
RETURN

FIG. 16

```
<IDOCTYPE dbc SYSTEM "http://www.xxx.co.jp/dbc.dtd">
<head>
<title News Print</title>

<script language = "JavaScript">
var printenable = 0;

function initialize(){                                                    //(B)
   if(rdy == 0){
      document.getElementByld("StatusText");firstChild.data = "STATUS : CONNECT PRINTER";  return;
    }
}

function print){
   var result = browser.prnStart("~/printdata.xml");
   if(result == 1){
      document.getElementByld("StatusText");firstChild.data = "STATUS : NOW PRINTING";
    }
}

functulon proccess_device_event(){
   device = document.currentEvent.DeviceGroup;
   event = document.currentEvent.EventID;
   value = document.currentEvent.Value;
```

FIG. 17

```
  if(device == "printer" && event == "device_altached"){                                    //(C)
      document.getElementByld("StatusText").firstChild.data = "STATUS : PRINTER IS RECOGNIZED, AND CHECKED.";
      var spc = browser.pmGetSpec("inaxsize","A4");                                         //(D)
      if(spec == 0){
         document.getElementByld("StatusText").firstChild.data = "STATUS : PRINTER IS NOT COMPATIBLE WITH REQUIRED SHEET SIZE";
          return;
      }
      document.getElementByld("StatusText").firstChild.data = "STATUS : READY TO PRINT";
  }
  if(device == "printer" && event == "print_finished"){                                     //(E)
      document.getElementByld("StatusText").firstChild.data = "STATUS : PRINTING COMPLETED";
  }
  if(device == "printer" && event == "print_resurned"){                                     //(F)
      document.getElementByld("StatusText").firstChild.data = "STATUS : PRINTING RESUMING";
  }
  if(device == "printer" && event == "ink_empty"){                                          //(G)
      document.getElementByld("StatusText").firstChild.data = "STATUS : LACK OF INK";
      document.getElementByld("objVideo").data = "ink_change.mpg";
      document.getElementByld("objAudio").data = "ink_change.mpg";
  }
  if(device == "printer" && event == "paper_empty"){                                        //(H)
      document.getElementByld("StatusText").firstChild.data = "STATUS : LACK OF COPY SHEETS";
  }
}
</script>
</head>
```

FIG. 18

```
<de_event>
  <de_item type = "DeviceEventFired" subscribe = "subscribe" device_group = "printer" oneccur = "preccess_device_event();/>          //(I)
</de_event>

<body onLoad = "initialize()">                                                                                                    //(A)
<div style = "left:50px; top:40px; width:480px; height:270px;">
  <object Id = "objVideo" style = "left:0px; top:0px; width:480px; height:270px;" data = "/-1" type = "video/X-arib-mpeg2" remain = "remain"/>
  <object id = "objAudio" data = "/-1" type = "audio/X-arib-mpeg2-aac" streamstatus = "play"/>
</div>
<div style = "top:38px; left:583; width:310px; height:463px">
  <p style = "left:4px; top:0px; width:300px; height:80px; font-size:24px; line-height:24px;>NEWS SUMMARY IS PRINTED</p>
  <div style = "top:90px; left:5px; width:300px; height:42px;">
    <object Id = "pngPlate0" data = "~/0001/plate.png" type = "image/X-atrib-png"/>
    <p id = "pMenu0" style = "top:5px; left:1px; width:300px; height:42px; font-size:24px>PRINTING STARTS</p>
  </div>
  <p Id = "StatusText" style = "left:4px; top:150px; width:300px;height:80px; font-size:24px; line-height:24px;>STATUS :</p>
</div>
<div style = "left:70px; top:350px; width:480px; height:150px;">
  <p id = "pPrintBtn" style = "left:164px; top:19px; width:200px; height:30px; font-size:24px>PRESS RETURN KEY TO RETURN TO MENU</p>
</div>
</body>
```

FIG. 19

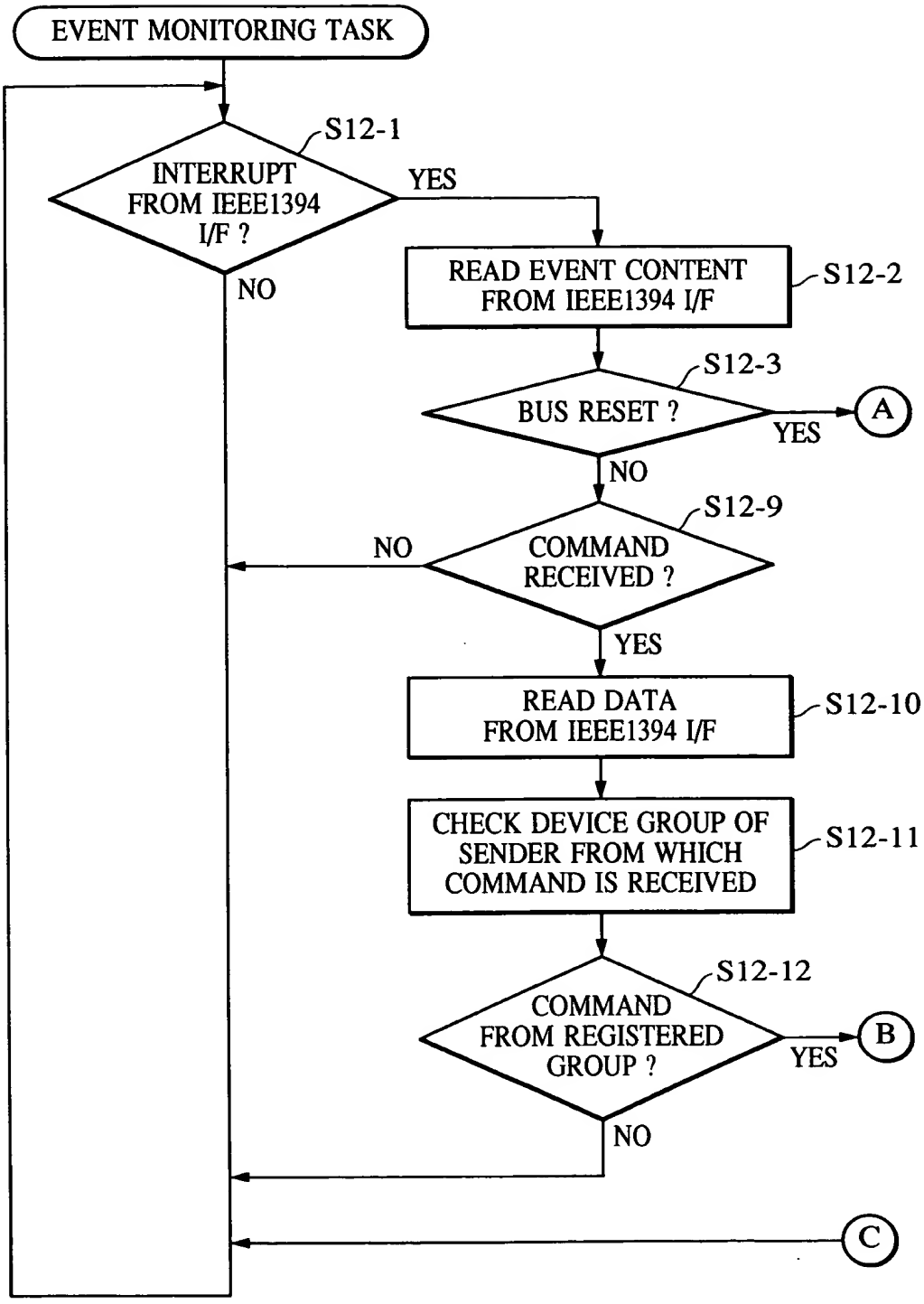
EVENT MONITORING TASK
S12-1
INTERRUPT FROM IEEE1394 I/F ?
YES
NO
READ EVENT CONTENT FROM IEEE1394 I/F
S12-2
S12-3
BUS RESET ?
YES
A
NO
S12-9
NO
COMMAND RECEIVED ?
YES
READ DATA FROM IEEE1394 I/F
S12-10
CHECK DEVICE GROUP OF SENDER FROM WHICH COMMAND IS RECEIVED
S12-11
S12-12
COMMAND FROM REGISTERED GROUP ?
YES
B
NO
C

FIG. 20

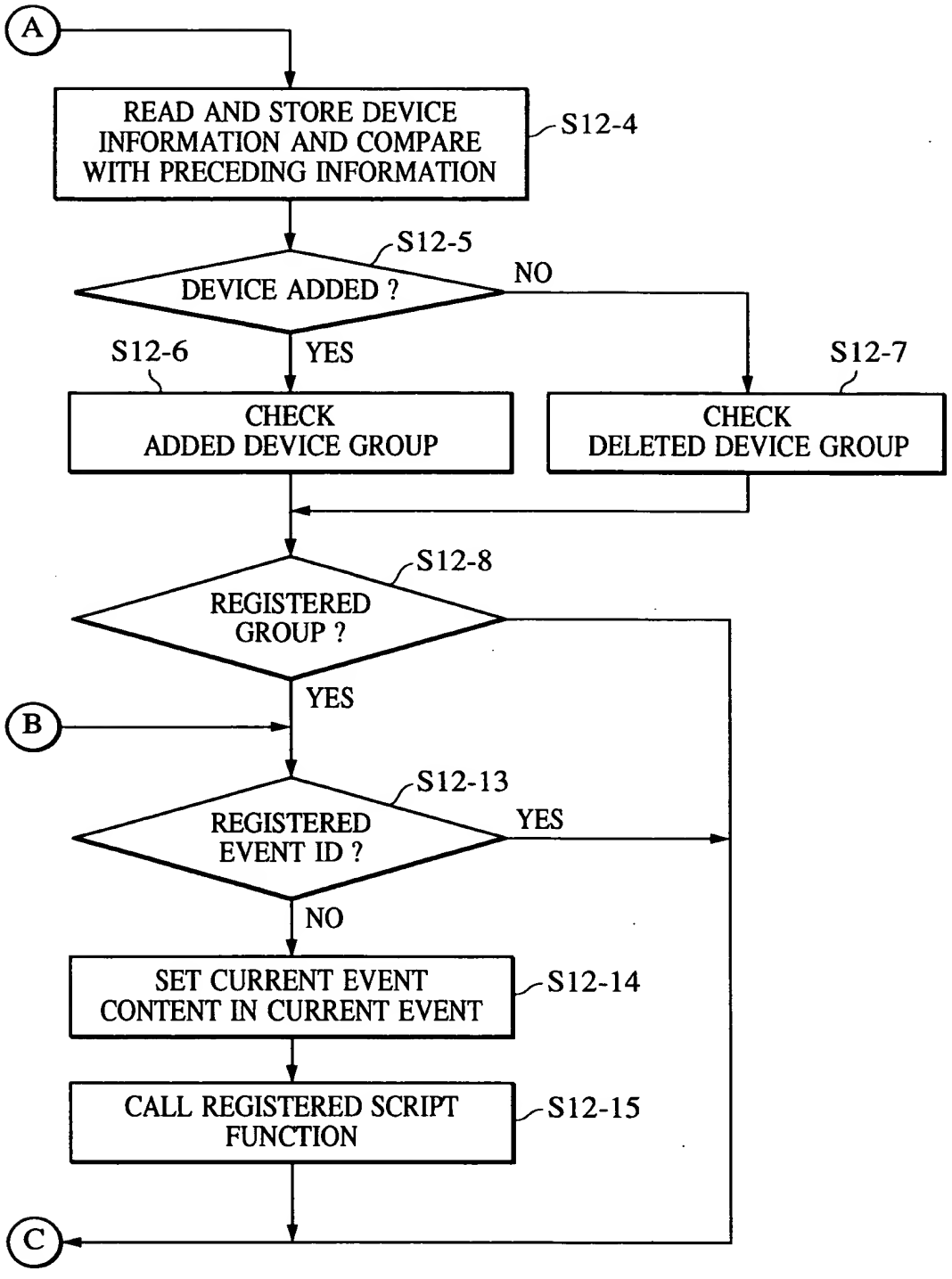
A
READ AND STORE DEVICE INFORMATION AND COMPARE WITH PRECEDING INFORMATION
S12-4
S12-5
DEVICE ADDED ?
NO
YES
S12-6
S12-7
CHECK ADDED DEVICE GROUP
CHECK DELETED DEVICE GROUP
S12-8
REGISTERED GROUP ?
YES
B
S12-13
REGISTERED EVENT ID ?
YES
NO
SET CURRENT EVENT CONTENT IN CURRENT EVENT
S12-14
CALL REGISTERED SCRIPT FUNCTION
S12-15
C

FIG. 21

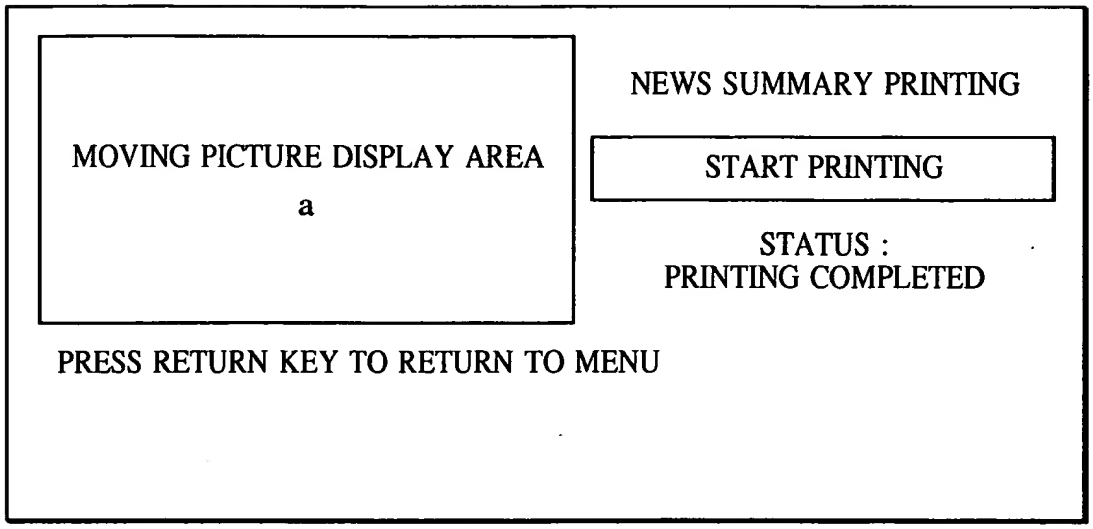
MOVING PICTURE DISPLAY AREA
a
NEWS SUMMARY PRINTING
START PRINTING
STATUS :
PRINTING COMPLETED
PRESS RETURN KEY TO RETURN TO MENU

FIG. 22

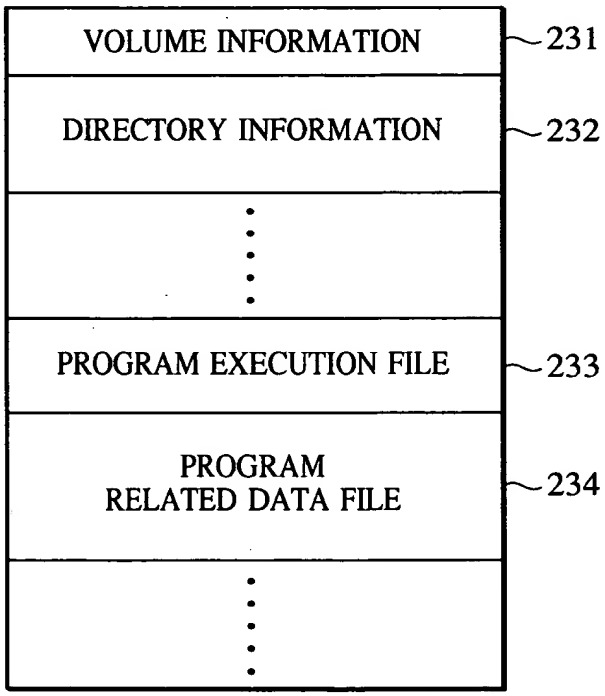
VOLUME INFORMATION
231
DIRECTORY INFORMATION
232
PROGRAM EXECUTION FILE
233
PROGRAM
RELATED DATA FILE
234

FIG. 23

09897560 - 111501

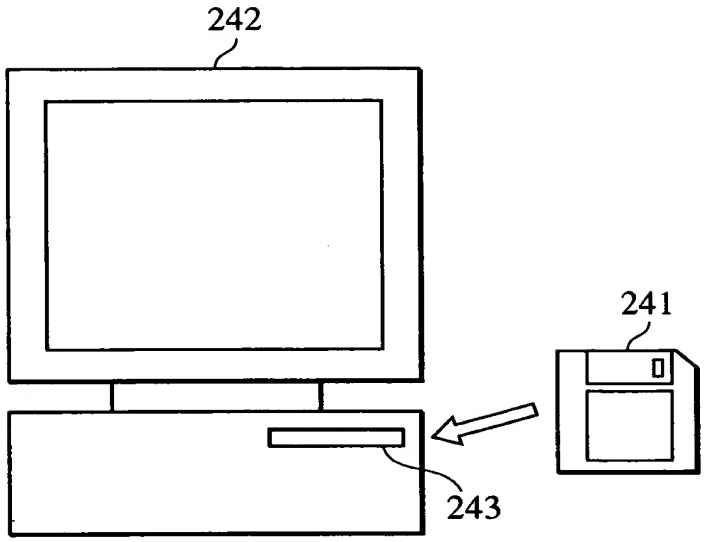

FIG. 24

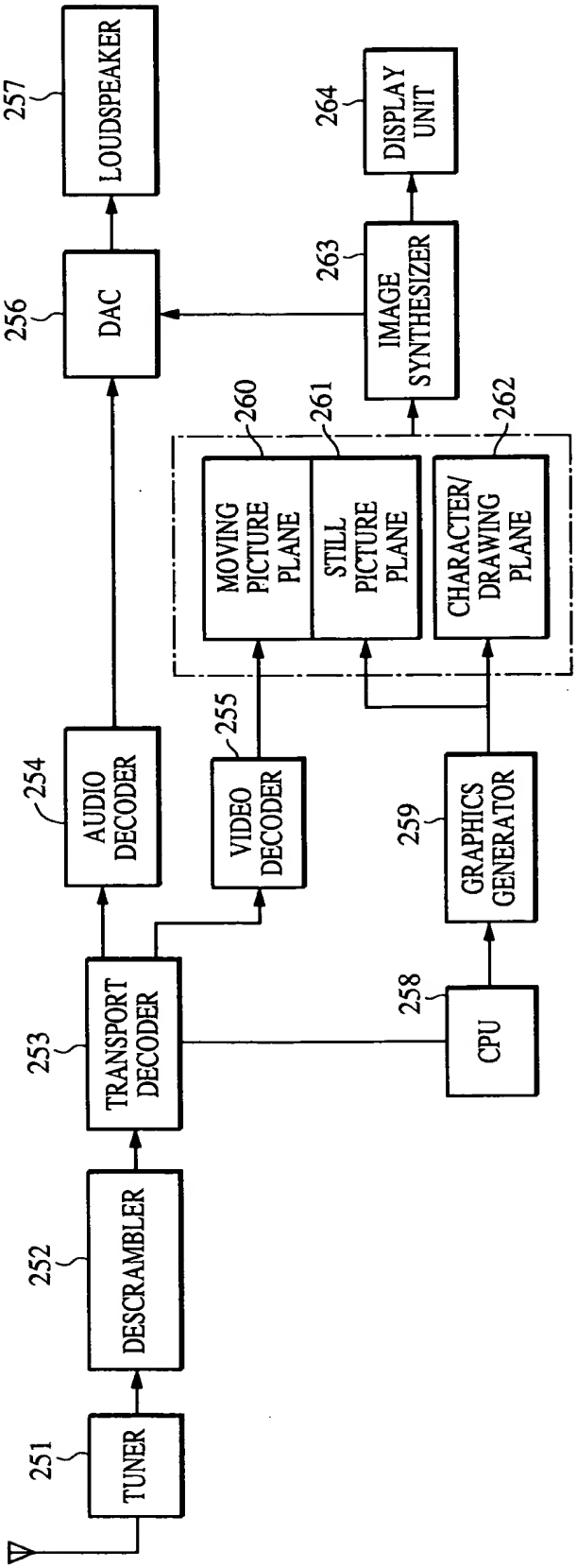
251
TUNER
252
DESCRAMBLER
253
TRANSPORT DECODER
254
AUDIO DECODER
255
VIDEO DECODER
256
DAC
257
LOUDSPEAKER
258
CPU
259
GRAPHICS GENERATOR
260
MOVING PICTURE PLANE
261
STILL PICTURE PLANE
262
CHARACTER/ DRAWING PLANE
263
IMAGE SYNTHESIZER
264
DISPLAY UNIT

FIG. 25